

CLAIMS

What is claimed is:

1. A method of constructing a metallization structure on a preexisting
2 dielectric layer of an integrated circuit during fabrication of the integrated circuit, the
method comprising the steps of:
4 depositing a layer of titanium onto the preexisting dielectric layer of the
integrated circuit;
6 depositing a layer of aluminum onto the layer of titanium;
heating the integrated circuit sufficiently to cause the layer of titanium to
8 become at least partially alloyed with the layer of aluminum; and
further heating the integrated circuit at 400 degrees C for about 45 minutes so
10 that impurities from the dielectric layer have passivated structural defects within a
silicon layer of the integrated circuit.
2. The method of claim 1, wherein the thickness of the layer of titanium
2 as deposited is limited so that the layer of titanium will completely alloy with the
layer of aluminum as a result of the heating of the integrated circuit.
3. The method of claim 1, wherein the thickness of the layer of titanium
2 as deposited is less than or equal to 200 angstroms thick.
4. The method of claim 1, further comprising the step of depositing a
2 layer of titanium-nitride onto the layer of aluminum.